

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2005/000040

International filing date (day/month/year)
05.01.2005

Priority date (day/month/year)
05.01.2004

International Patent Classification (IPC) or both national classification and IPC
B64C1/12, B32B3/12, B64C1/40

Applicant
AIRBUS DEUTSCHLAND GMBH

1. This opinion contains indications relating to the following items:

- ☐ Box No I Basis of the opinion
- ☐ Box No II Priority
- ☐ Box No III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No IV Lack of unity of invention
- ☐ Box No V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No VI Certain documents cited
- ☐ Box No VII Certain defects in the international application
- ☐ Box No VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/000040

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 9-13,15

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 9-13,15 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the whole application or for said claims Nos.
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form ☐ has not been furnished

☐ does not comply with the standard

the computer readable form ☐ has not been furnished

☐ does not comply with the standard

- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

Re Item III.

- 1 Claims 9-13 and 15 fail to meet the requirements of Art. 6 PCT, as they are highly unclear for the following reasons:
 - 1.1 Claims 9-13
 - 1.1a The relative terms ("thick" and "thin") used in claims 9-13 have no well-recognised meaning and leave the reader in doubt as to the meaning of the technical features to which they refer, thereby rendering the definition of the subject-matter of said claims unclear, Article 6 PCT.
 - 1.2 Claim 15
 - 1.2a The term "point of adhesive bond" is vague and unclear and leaves the reader in doubt as to the meaning of the technical feature to which it refers, thereby rendering the definition of the subject-matter of said claim unclear, Article 6 PCT.
 - 1.2b Moreover, claim 15 does not meet the requirements of Article 6 PCT also in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter in terms of the result to be achieved (achieving a "non-detachable and burn-through proof point of adhesive bond"), which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result.
 - 1.4 In the case of these claims, the lack of clarity is such that no opinion can be given concerning the patentability of their subject-matter.

Re Item V.

- 2 Reference is made to the following documents:
 - D1 : EP 0 279 620 A (ADVANCED TECHNOLOGY & RESEARCH INC; ATR INTERNATIONAL, INC) 24 August 1988 (1988-08-24)
 - D2 : EP 0 624 462 A (CIBA-GEIGY AG) 17 November 1994 (1994-11-17)

D3: US-A-4 759 964 (FISCHER ET AL) 26 July 1988 (1988-07-26)

3 INDEPENDENT CLAIM 1

3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject matter of claim 1 does not involve an inventive step in the sense of Article 33(3)PCT.

3.1a Document D1, which is considered to represent the most relevant state of the art to the subject matter of claim 1, discloses (the references in parentheses applying to this document):

An arrangement of an interior panel (30,32) of an aircraft passenger cabin, in which arrangement the interior panelling (10) comprises honeycomb panelling made up of several honeycomb panels (30,32) arranged side by side, wherein a honeycomb core (82) is glued to a top and a bottom cover layer (84) facing the passenger cabin and a space, respectively; wherein these panels (30,32) are arranged so as to extend parallelly to the outer skin (12) of the aircraft, and wherein said panels (30,32) also include further honeycomb formations (82) which are additionally stacked on and glued to the first honeycomb core (82).

3.1b The subject-matter of independent claim 1 differs from the disclosure of D1 in that :
The arrangement is to provide protection against fire situations and the honeycomb core is made of paper or aramide.

3.1c The problem to be solved by the present invention may therefore be regarded as that of providing fire safety.

3.1d In view of D2 the solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The stacked honeycomb panel of D1 comprises a core made of aramide paper and is proposed for applications requiring high fire safety.

- 3.1e Therefore the features disclosed in D1 and D2 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claim 1 thus cannot be considered inventive (Article 33(3) PCT).

4 INDEPENDENT CLAIM 20

- 4.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject matter of claim 20 does not involve an inventive step in the sense of Article 33(3)PCT.

- 4.1a Document D1, which is considered to represent the most relevant state of the art to the subject matter of claim 20, discloses (the references in parentheses applying to this document):

An insulation system for an outer skin (12) of a vehicle, comprising a plurality of honeycomb panels (30,32) arranged side by side; wherein each of the plurality of honeycomb panels (30,32) has a honeycomb core (4), sandwiched between at least two cover layers (84) including a top-supported cover layer and a bottom-supported cover layer, wherein the honeycomb cores are supported by and glued to the at least two cover layers, so that the top layer faces the interior of the vehicle and the bottom layer faces the outer skin of the vehicle.

- 4.1b The subject-matter of independent claim 20 differs from the disclosure of D1 in that it also appears to comprise at least two carbon-fibre-reinforced layers respectively arranged on each end of the honeycomb core and in that the honeycomb cores are paper or aramide honeycombs.

- 4.1c The problem to be solved by the present invention may therefore be regarded as that of providing a strengthened honeycomb.

- 4.1d In view of D2 the solution proposed in claim 20 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) because the use of multiple carbon-fibre-reinforced layers as facing layers, as well as the use of paper

and aramide honeycombs comes within the scope of the customary practice followed by persons skilled in the art (see D3), especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claim 20 also lacks an inventive step.

5 DEPENDENT CLAIMS 2, 4, 5, 7, 14, 21, 22

Dependent claims 2, 4, 5, 7-9, 11, 12, 14, 21, 22 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

5 DEPENDENT CLAIMS 3, 6, 8, 16-19

The combination of the features of dependent claims 3, 6, 8, 16-19 are neither known from, nor rendered obvious by, the available prior art. The reasons are as follows:

The subject-matter of claim 3, from which claims 6 and 16 to 19 all depend, comprise a cover layer made of fibreglass-reinforced plastic enclosed by a burn-through proof foil. Because enclosing cover layers in burn-through-proof foil has not been previously suggested in the art as a means of improving fire safety, it appears that it would not have been obvious for the skilled person to combine the features of claim 3 or of the dependent claims 6 and 16 to 19. Although the subject-matter of claim 8 does not comprise all the features of claim 3, it does also comprise this characterising feature and would therefore also appear to be inventive.

Re Item VIII.

6 All the claims also lack clarity according to Art. 6 PCT for the following reasons:

- 6.1** The terms "CFK" and "GFK" have no recognised meaning in English, language of the present application. Although they are the abbreviations of "carbon-fibre reinforced plastic" and "glass-fibre reinforced plastic" in German, respectively, there is no passage in the whole application as filed clarifying their meaning, so that it appears that it will not be possible to amend the application in that sense without infringing Arts. 19 or 34 PCT.

**WRITTEN OPINION OF THE
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International application No.
PCT/EP2005/000040

Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-8,14,16-22
	No: Claims	
Inventive step (IS)	Yes: Claims	3,6,8,16-19
	No: Claims	1,2,4,5,7,14,20-22
Industrial applicability (IA)	Yes: Claims	1-8,14,16-22
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet